

Jobreport

Modern concrete production with Liebherr



LIEBHERR



Situation

The family-owned company SCHWENK is one of the largest producers of cement and concrete in Southern Germany. SCHWENK is the preferred concrete supplier for high-quality concrete in all construction projects in the Ulm region. Therefore the latest Liebherr Betomat IV-500 was built as an investment in the future at the Danube valley (Ulm) site for the production of modern concrete.

Task

A mixing tower with components according to the latest state-of-the-art was required for the location Danube Valley in order to be able to produce economically diverse concrete types in the next decades. Special emphasis has been placed on smart solutions for energy efficiency, safety technology, high-performance production and the user-friendly work on the plant.

Solution

The concept of this Liebherr mixing tower Betomat IV-500 consists of an on-site concrete building and a 500-m³ round silo (8 chambers). The individual components such as the combined cooling and heating system are arranged generously in the concrete building and can be reached comfortably with additional equipment (e.g. tools, spare parts, etc.).

The plant is equipped with the new Liebherr twin-shaft mixer and the Liebherr ring-pan mixer to produce up to 60.000 m³ of modern concrete. In combination with the cooling and heating system concrete can be produced even at extreme temperatures. The mixer motors are designed according to the efficiency class IE 3 and correspond to the state-of-the-art design as well as the keyless interlocking system for the mixer covers. An extra dosing installation with a downstream weighing belt is included in the plant for the addition of special fibers. Next to the Betomat a Liebherr recycling plant LRS 908 with an output rate of 22 m³/h is set up for the preparation of waste concrete. Both truck mixers and concrete pumps can discharge the waste concrete into the recycling plant on ground level.

The system is equipped with an additional LED light concept for optimal working conditions during service work (e.g. cleaning the interior area of the mixers). Hereby, the relevant working areas are optimally illuminated. An additional highlight is the cleaning mode for the mixing systems at a reduced speed. While the mixer cover is open, the machine operator can slowly turn (1 rpm) the mixing shafts into the appropriate cleaning position by means of using a two-hand operating unit.

Technische Daten	Betomat IV-500
Output capacity	110 - 140 m ³ /h depending on recipe
Storage volume aggregates	500 m ³ (8 chambers)
Diameter tower silo	8,8 m
Storage volume cement	4 x 150 t
Number of drive lanes	2
Mixing system 1	Liebherr twin-shaft mixer DW 3.0 (new program)
Mixing system 2	Liebherr ring-pan mixer RIM 1.5-D (with double-agitator)
Total height mixing tower	30 m
Output Liebherr recycling plant LRS 908	22 m ³ /h

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